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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/976,540	10/12/2001	Genady Grabarnik	YOR920010746US1	1483

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EXAMINER	
SHAYANFAR, ALI	
ART UNIT	**PAPER NUMBER**
2142	
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07/12/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	09/976,540	GRABARNIK ET AL.	
	Examiner	Art Unit	
	Ali Shayanfar	2142	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *4/6/2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-19* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-19* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

This Office Action is responsive to reply filed on April 26, 2007.

Response to Arguments

1. Applicant's arguments, filed 4/16/2007 with respect to declaration of common ownership have been fully considered and are persuasive. The Hellerstein et al (US 2002/0073195) has been withdrawn.

Response to Arguments

With regards to the Applicant's remarks filed on April 26, 2007:

Regarding the rejection of the claims 1-3 and 15-18 and 19 Applicant's arguments have been considered and are deemed persuasive. However, upon further consideration, new grounds of rejection are made.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-3 and 15-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cookmeyer et al (US 6,529,954) in view of Tenney et al (US 6,944,584 B1)

Regarding claim 1, Cookmeyer teaches apparatus for providing decision support to an analyst in accordance with an event management system which manages a network with one or more computing devices, the apparatus comprising: at least one processor operative to perform (Cookmeyer, col.4, line 9-11):

analysis of data representing past events associated with the network of computing devices being managed by the event management system, the automated analysis comprising generation of one or more visualizations of one or more portions of the past event data and discovery of one or more patterns in the past event data (Cookmeyer, col.3, 1.17-38, in which a knowledge based expert analysis corresponds to a automated analysis system) and automated rule management comprising construction and validation of one or more rules formed in accordance with the analysis of the past event data, wherein one or more rules are constructed and validated based directly on at least a portion of the one or more visualization generated from the corresponding analysis of the one or more portion of the past event data and the discovery of at least a portion of the one or more patterns in the past event data (Cookmeyer, Fig.9, col.3, 1.17-20, 1.32-38, co1.4, 1.60, col.5, 1.58-67, and co1.21, 1.51-52, col.22, 1.13-33); and memory, coupled to the at least one processor, which stores at least a portion of results associated with the automated event analysis and rule management operations (Cookmeyer, co1.7, 1.15-24)

Cookmeyer does not disclose that rule management and analysis of the data can be done off-line (before putting them on the network interface card).

Tenny shows all the steps in the claim (rule management and analysis of the data) can be done off-line (Col 5, line 21-32)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Cookmeyer by providing an off-line analysis as taught by Tenny in order to secure rule management and analysis of the data and prevent other user to monitor the analysis.

Regarding claim 2, Cookmeyer further discloses the apparatus of claim 1, Wherein, the past event data is obtained from an event database and the one or more rules are provided to a rule database, the event database and the rule database being associated with an execution system of the event management system. (Cookmeyer, Col 25, line 37-43).

Regarding claim 3, Cookmeyer further discloses the apparatus of claim 2, Wherein, generation of the one or more visualizations of the one or more portions of the past event data further comprises:
selecting a subset of the past event data from the event database(Cookmeyer, Col.22, l. 13-33); generating a visualization of the subset of past event data using a visualization tool (Cookmeyer, Col.7, line 25-37); the analyst reviewing the visualization to determine whether there are any groupings of events that are of interest presented therein

(Cookmeyer, Col 22, line 34-38); and performing an appropriate action when an event grouping of interest is found (Cookmeyer, Col 22, line 41-47).

Regarding claims 15-16 have similar limitations as claims 1-2, the difference is one is claimed for apparatus, and the other is claimed for means function. Therefore, claims 15-16 are rejected for the same reasons set forth in the rejection of claims 1-2.

Regarding claims 17-18 have similar limitations as claims 1-2, the difference is one is claimed for apparatus, and the other is claimed for event support system. Therefore, claims 17-18 are rejected for the same reasons set forth in the rejection of claims 1-2.

Claims 4-6 are rejected under 35 U.S.C 103(a) as being unpatentable over Cookmeyer et al (US 6,529,954) in view of Tenney et al (US 6,944,584 B1) further in view of Ma et al (Publication, Maet al., Mining Event Data for Actionable Patterns, IBM T.J. Watson Research Center, NY, December 2000).

Regarding claim 4, Cookmeyer teaches features of the invention substantially as claimed, discovery of the one or more patterns in the past event data, selecting a subset of the past event data from the event database (Cookmeyer, Col 22, line 50-63); generating a visualization of the one or more patterns using a visualization tool (Cookmeyer, Col 22, line 61-63, statistics corresponds to the pattern).the analyst

reviewing the visualization to determine whether there are any patterns of interest presented therein (Cookmeyer, Col.23, line1-10); and performing an appropriate action when a pattern of interest is found (Cookmeyer, Col.23, line 28-33). Although the above mentioned prior art teaches event analysis using visualization, it does not include the mining algorithm.

However, Ma teaches mining the subset of the past event data to discover the one or more patterns using a mining tool (Ma, page 4, section 2, algorithm 1).

Because knowing the offline event analysis of event management (Ma, fig. 1) uses event flow data to discover one or more patterns using a mining tool. (see Ma, page 5, 5th paragraph), which can be used to modify the select the data source as an off-line analysis of a capture data file and set-up software filter. (see Cookmeyer, Col.21, line 38-46). It would have been obvious to one ordinary skilled in the art at the time the invention was made to incorporate the teaching of Howard for data mining algorithm as is well-known in the art to discovery patterns of interest with Cookmeyer's problem filter (discovery) structure. Therefore, the claimed invention would have been obvious to one of ordinary skill in the art at the time of the invention.

Regarding claim 5, Ma further discloses the apparatus of claim 2, wherein validation of the one or more rules farther comprises: selecting a subset of the past event data from the event database (Ma, page 4, 4th paragraph); finding one or more instances of patterns expressed in terms of left-hand sides of rules (Ma, page 2,

2nd , and 3rd paragraph); generating a visualization of the one or more pattern instances using a visualization tool (Ma, page 2, 3rd, and 4th paragraphs); analyzing the left-hand sides of rules using a rule validation tool(Ma, page 1, fig. 1); displaying results of the analysis operation (Ma, fig. 3); the analyst assessing analysis results (Ma, page 3, 1st paragraph); and marking the rules as one of validated and not validated based on the assessment by the analyst (Ma, page 9, fig. 6).

Regarding claim 6, Ma further discloses the apparatus of claim 2, wherein construction of the one or more rules further comprises:
selecting a subset of the past event data from the event database (Ma, page 6, 2nd paragraph);mining the subset of the past event data to discover the one or more patterns using a mining tool (Ma, page 6, 3rd paragraph); assessing significance of the one or more patterns using a visualization tool (Ma, page 2, 3rd paragraph); constructing the one or more rules from a selected subset of the one or more patterns using a rule construction tool (Ma, page 3, 3rd paragraph); and writing the one or more rules in the rule database (Ma, page 10, 1st paragragh)

Regarding claims 7-12 have similar limitations as claims 1-6, the difference is one is claimed for apparatus, and the other is claimed for method.
Therefore, claims 7-12 are rejected for the same reasons set forth in the rejection of claims 1-6.

Regarding claims 13-14 have similar limitations as claims 7-8, the difference is one is claimed for method, and the other is claimed for manufacture.
Therefore, claims 13-14 are rejected for the same reasons set forth in the rejection of claims 7-8.

Claim 19 is rejected under 35 U.S.C 103(a) as being unpatentable over Ma et al (Publication, Maet al., Mining Event Data for Actionable Patterns, IBM T.J. Watson Research Center, NY, December 2000). In view of Tenney et al (US 6,944,584 B1)

Regarding claim 19, Ma discloses an event management decision support system for providing decision support to an event management system which manages a network with one or more computing devices, the system comprising (Ma, fig. 1): an event analysis module, further comprising an event mining module and an event visualization module, wherein the event mining module discovers patterns in event data, and wherein the event visualization module provides a mechanism for visualizing at least a result of a pattern discovery and a rule analysis (Ma, fig. 1, element block of Event Analyzer); and a rule management module, further comprising a rule validation module and a rule construction module (Ma, fig. 1, element box of Rule Generator), wherein the rule validation module maintains consistency of at least a rule with the event data (Ma, page 8, ninth, and tenth paragraphs), and wherein the rule construction module provides a mechanism for constructing one or more rules based on event patterns mined by the event mining module; wherein the one or more rules are

constructed by the rule construction module and validated by he event visualization module from the corresponding analysis of one or more portions of the event data and the discovery of at least a portion of the one or more patterns in the event data by the event mining module (Ma, page 2, 3r~, and 4th paragraph, page 3, 3rd paragraph).

MA does not disclose that construction module and visualization module can be done off-line (before putting them on the network interface card).

Tenny shows all the steps in the claim (construction module and visualization module comprising Software) can be done off-line (Col 5, line 21-32)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of MA by providing an off-line analysis as taught by Tenny in order to secure rule management and analysis of the data and prevent other user to monitor the analysis.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ali Shayanfar whose telephone number is 571-272-9739. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Caldwell can be reached on 571-272-3868. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Ali Shayanfar

Andrew Caldwell

ANDREW CALDWELL
SUPERVISORY PATENT EXAMINER